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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,935	12/14/2001	Simon A. J. Holdsworth	GB920010076US1	6280

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EXAMINER

SUAZO, RAINIER A

ART UNIT	PAPER NUMBER
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2144

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/016,935

Applicant(s)

HOLDSWORTH, SIMON A. J.

Examiner

Rainier Suazo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>02/27/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This application has been examined. Claims **1-16** presented for examination.

Objections

The disclosure is objected to because of the following informalities: inappropriate margins MPEP § 608.01(b). Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **1-4, 10-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Owens et al. (**US 6,633,630 B1**), hereinafter 'Owens' in view of Narasimham et al. (**US 6,073,165**) hereinafter 'Narasimhan'.

3. Regarding claims **1, 14 and 16**,

Owens taught a system for providing a publish/subscribe service for publisher and application programs, comprising:

means for receiving published messages from one or more publisher application programs (**abstract, figs. 1-3, column 7 lines 4-11, column 7 lines 11-24 and 55-62; and column 8 lines 29-31**);

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means for forwarding received messages to connected message brokering systems **(column 7 lines 24-29 and column 8 lines 32-42);**

means for selecting a message filtering policy which is appropriate for the communication characteristic **(fig. 3, column 8 lines 34-36, fig. 5 and column 10 lines 24-56); and**

means for controlling the forwarding of messages via the inter-broker communication link using the selected message filtering policy **(column 10 line 57 to column 11 line 21).**

Owens did not expressly teach details regarding means, responsive to a communication characteristic of an inter-broker communication link between the message brokering system and one of said connected message brokering systems. Owens extensively motivated the exploration of the art of forwarding of messages between messaging brokers such as from "information service 14 ... to another service provider 16" (column 7 lines 27-29, column 7 line 49-62, column 8 lines 6-10 column 8 lines 39-42 and column 12 lines 19-20 and lines 41-53).

Narasimhan, in the same field of endeavor related to message filtering in computer networks, taught selectively taking a configurable course of action depending on the link conditions or characteristics **(column 7 lines 2-14).** Narasimham recites:

"This may be accomplished by configuring the message servers 103 and 105 to recognize failure conditions (such as failure return codes, or lack of a successful return code) and accordingly reallocate resources in the event of

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failures with either the servers or the database, such that a message is rerouted via a redundant resource or connection to ensure that the message is reliably forwarded to the receiver 133. The system will thus adaptively reconfigure itself in response to changing network and communication conditions."

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the methods/systems of Owens with the teachings of Narasimhan. Owens motivated the exploration of the art of automatically selecting filtering policies (**column 8 lines 29-31**). Narasimhan motivated the exploration of the art of selectively applying filters to messages (**fig. 2 and column 4 lines 55-63**). Owens invention would have been improved by the combination with the teachings of Narasimhan by including specific considerations regarding link characteristics such as lack of successful return code (see Narasimhan **column 7 lines 2-14**). Therefore resulting in an invention that filters automatic messages transmission based in rules or policies specified by sender/receiver and based on transmission link conditions, characteristics or the like.

4. Regarding claim 2,

Owens taught a system wherein the communication characteristic used to select a message filtering policy is a communication protocol provided by the communication link (**column 8, lines 39-42**). Although Owens is not expressively evaluating the link

characteristics it is clear that the system is performing a conversion depending on selected options and based on the expected communication medium. Owens also taught the use of different inbound and outbound communication types (inherently using different protocols) (**figs. 2-3 and 6-15**).

Narasimhan taught the provision of transmission services configurable to use either SMTP or POP (**column 3 lines 10-20**).

5. Regarding claim 3,

Narasimhan taught a system wherein establishing an inter-broker communication link includes: defining the communication characteristic for the link (**column 3 lines 15-20**). It is well known in the art that mail client configuration, such as those described by Narasimhan, include definitions of the communication link such as IP address or server name and authentication information.

Owens taught comparing the communication characteristic with a list of administrator-defined associations between communication characteristics and message filtering policies, to select a message filtering policy for the communication link; and storing an identification of the selected message filtering policy in association with the communication link (**column 8 lines 39-42**). In Owens disclosures the association of the policies or options is (inherently) stored first as defined by the receiver, and applied to messages depending on the communication medium.

6. Regarding claim 4,

Narasimhan taught a system wherein the communication characteristic used to select a message filtering policy includes a dynamic communication characteristic **(column 7 lines 13-15)**.

7. Regarding claim 10,

Owens taught a system wherein the selection of a message filtering policy is specific to a selected message topic or topic group **(figs. 8 and 16; and column 11 lines 62-67)**. Note it is well known in the art that the words in the subject of an email message represent the main topic of the message.

8. Regarding claim 11,

Owens further taught at least a first and a second message broker **(figs. 1, 14 and 16 and column 7 lines 24-31)**, connected via one or more inter-broker communication links **(fig. 1 [18], and column 7 lines 55-62)** and configured to provide a publish/subscribe service for publisher and subscriber application programs **(fig. 1 [20] and [24])**.

9. Regarding claims 12 and 13,

Owens taught a system wherein said means for selecting a message filtering policy is adapted to select one of a plurality of different policies in response to characteristics of received message further defining such characteristic as a topic identifier within a received message ("subject keyword") **(fig. 8 column 11 lines 63-67)**.

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10. Regarding claim 15,

Storing a definition of a message filtering policy for inter-broker communications for each of said communication protocols, the filtering policy either specifying no filtering or specifying a filtering rule is inherent in Owens teachings regarding the communication of the communication server 28 with another service provider 16 based on known preferences (**column 7 lines 24-31**); Owens also taught, responsive to receipt of a published message at a first message broker, referring to characteristics of the received message to determine an appropriate inter-broker communication protocol; selecting the determined protocol and, if the selected protocol's stored message filtering policy requires application of a filtering rule, applying the filtering rule to the message; and transmitting the message to a second broker using the selected communication protocol only if transmission consistent with the filtering rule (**column 8 lines 36-42**).

Narasimhan also taught details regarding multiple communication protocols for inter server communication and conditional selection of the course of action for establishing a inter server communication (**column 3 lines 10-20 and column 7 lines 2-14**).

11. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owens et al. (US 6,633,630 B1), hereinafter 'Owens' in view of Narasimham et al. (US 6,073,165) hereinafter 'Narasimhan', further in view of Hurst et al. (US 6,131,123) hereinafter 'Hurst' and further in view of Khan et al. (US 2002/0143951 A1).

The combination of Owens and Narasimhan taught the invention substantially as claimed. However the combination of Owens and Narasimhan did not expressively

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taught that the communication characteristic used to select a message filtering policy includes a measure of subscription activity; and that the communication characteristic used to select a message filtering policy includes a measure of redundant message transmissions.

12. Regarding claim 5,

Khan taught a system wherein the communication characteristic used to select a message forwarding policy includes a measure of subscription activity **[0033]**.

13. Regarding claim 6,

Hurst taught a system wherein the communication characteristic used to select a message forwarding policy includes a measure of redundant message transmissions **(abstract, column 4 lines 5-12, column 5 lines 57-63, column 7 lines 7-14, column 7 lines 24-26, column 7 lines 35-47 and column 8 lines 54-65)**.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to further modify the methods/systems of Owens combined with Narasimhan, with the teachings of Khan and Hurst. Owens motivated the exploration of the art of selecting filtering policies (column 8 lines 29-31). Hurst motivated the exploration of the art of selectively forwarding messages to recipients (column 2 lines 54-57 and column 4 lines 5-12). Hurst motivated the exploration of the art of multicasting and unicasting in column 1 lines 19-46. Khan motivated the exploration of the art of multicasting and unicasting in paragraphs 0002, 0003, 0005 and 0007. This modification would have improved Hurst disclosure with the teachings of Khan providing a system that sends or forwards a multicast or a unicast message, using a forward

agent. See Khan [0012]. The combination of Owens with Narasimhan would have been improved with the teachings of Khan and Hurst to enable the provision of messages distribution considering active subscriptions (see Khan [0033]) and avoiding forwarding redundant messages to hosts located relatively (see Hurst **column 4 lines 5-12**).

14. Claims **7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Owens et al. (**US 6,633,630 B1**), hereinafter 'Owens' in view of Narasimham et al. (**US 6,073,165**) hereinafter 'Narasimhan', further in view of Delaney et al. (**US 2001/0027479 A1**).

15. Regarding claim **7**,

The combination of Owens and Narasimhan taught the invention substantially as claimed. However the combination of Owens and Narasimhan did not expressively taught means for controlling includes means for implementing a broadcast messaging policy and means for implementing a proxy-subscription-based message filtering policy, a respective one of said means for implementing being activated in response to said selection of a message filtering policy.

Delaney taught a system wherein a preferred implementation in which broadcast and multicast (a variation of broadcast to subscribed or selected receivers) is used, more preferably, the decision to select multicast or broadcast is made according configuration set by the network administrator **[0047]**.

It would have been obvious to one of ordinary skills in the art at the time the invention was made to further modify the combination of Owens and Narasimhan with

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the teachings of Delaney. Delaney motivated the exploration of the art of message transmission [0002]. The invention taught by the combination Owens and Narasimhan would have been improved with the teachings of Delaney by providing a systems that selectively determines whether broadcast or selectively send a message to neighboring brokers or final recipients.

16. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owens et al. (US 6,633,630 B1), hereinafter 'Owens' in view of Narasimhan et al. (US 6,073,165) hereinafter 'Narasimhan', further in view of Delaney et al. (US 2001/0027479 A1) and further in view of Khan et al. (US 2002/0143951 A1) hereinafter 'Khan'.

The combination of Owens, Narasimhan and Delaney taught the invention substantially as claimed, however this combination did not expressively teach a system wherein said means for implementing a proxy-subscription-based messaging policy comprises: means for receiving subscription information for connected message brokering systems and for storing said subscription information for comparison with received published messages; means for forwarding to connected message brokering systems subscription information for subscriber application programs connected the message brokering system and wherein the broadcast messaging policy is implemented for links which provide a non-transactional messaging protocol and the proxy-subscription-based message filtering policy is implemented for links which provide transactional messaging protocol.

17. Regarding claim 8,

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Khan taught means for receiving subscription information for connected brokering systems and storing such information for comparison with published messages [0029, 0030, 0031] (“...the source server on receipt of the “unicast join” message...”). Khan further taught forwarding subscription information to a connected message brokering system [0030] (“... the source server forward the client’s “unicast join” message to the designated agent...”).

18. Regarding claim 9,

Khan taught the use of IP addresses known to support transmission confirmation for assuring transmission completeness or delivery assurance required in some application [0027].

Delaney taught selectively selecting either IP multicast or broadcast according to the configuration set by the network administrator [0047].

Owens taught inter-broker exchange of billing information (fig. 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to further modify the methods/systems of Owens combined with Narasimhan and Delaney, with the teachings of Khan. Owens motivated the exploration of the art of selecting filtering policies (column 8 lines 29-31). Khan motivated the exploration of the art of inter-server communication (“...by the source server to a multicast enabled server computer...”) [0025]. The combined method/system of Owens, Narasimhan and Delaney would have been improved with the teachings of Khan to enable the receiving, storing and forwarding of subscription information in an inter-server communication environment (see Khan [0029-0033]) and selectively

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utilizing delivery assurance capabilities typically found in TCP/IP communication protocol (see Khan [0024]) such as CRC, further implementing such functionality distinctively for broadcasting or multicasting messages according to predetermined configuration (see Delaney [0027]) in links where delivery assurance is important, for example for properly billing a client (see Owens **fig. 3**).

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892 for details.

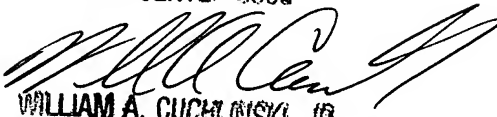
20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rainier Suazo whose telephone number is (571) 272-3931. The examiner can normally be reached on Monday through Friday, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on (571) 272-3925. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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